CLAIMS:

1. Polycrystalline alumina components with an additive of at least 0.001 wt-% $ZrO_2$ and optionally containing MgO in a concentration of at most 0.3 wt-% characterized in that the alumina contains at most 0.5 wt-% $ZrO_2$ as an additive and has an average crystal size $\leq 2$ μm, and a relative density higher than 99.95 % with a real in-line transmission RIT $\geq$ 30 % measured over an angular aperture of at most $0.5^0$ at a sample thickness of 0.8 mm and with a monochromatic wavelength of light λ.

2. Polycrystalline alumina components according to claim 1, characterized in that the average crystal size is $\leq 1$ μm and the real in-line transmission RIT is at least 40 %.

3. Polycrystalline alumina components according to claim 1 or 2, characterized in that the $ZrO_2$ additive is in a concentration from 0.1 wt-% to 0.3 wt-%, inclusive.

4. Discharge lamp characterized in that the lamp is provided with a discharge tube having a wall of a ceramic as claimed in any one of the preceding claims.

5. Lamp according to claim 4 characterized in that the discharge tube has an ionisable filling containing a metal halide.

6. Method for forming a polycrystalline alumina component as claimed in any one of the preceding claims characterized in that the process includes the steps of

- preparing a slurry of corundum power with a mean grain size $\leq 0.2$ μm,
- adding a dopant, selected from zirconia and a zirconium containing precursor,
- casting the slurry in a mould,
- drying and sintering of the moulded body thus formed, and
- performing a HIP treatment at a temperature of at least 1150 $^0$C for at least 2 hours.

7. Method according to claim 6, wherein the dopant is added as finely grained $ZrO_2$.

8. Method according to claim 6 or 7, wherein the finely grained $ZrO_2$ dopant has an average particle size of at most 100 nm.

9. Method according to claim 6, 7 or 8, wherein after the addition of the zirconia dopant the prepared slurry is slip cast in a mould.

10. Method according to claim 6, 7 or 8, wherein after the addition of the zirconia dopant the prepared slurry is gel cast in a mould.